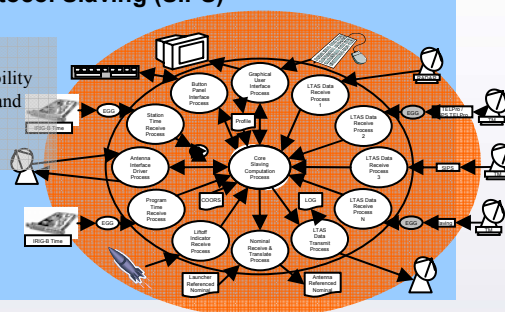
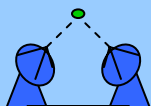


## Selectable Internet Protocol Slaving (SIPS)



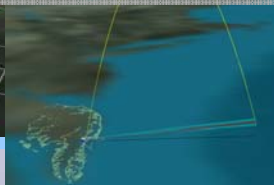
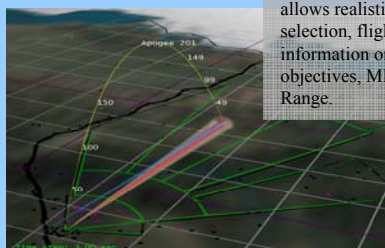
SIPS is a new antenna slaving system that will add slaving capability to antennas that currently lack it, and will replace old, failing slaving systems.



Tom Taylor  
Mike Matthews  
Debbie Parks  
John Elliott  
Ted Daisey  
Tony Baldwin  
Curtis Walker  
Roger Mason  
Angela Walker  
Amy Taylor  
Pam Pittman  
Sandy Kleckner  
Sarah Daugherty  
Bob Stancil  
Ben Cervantes  
Rodney Davis  
Donna Smith

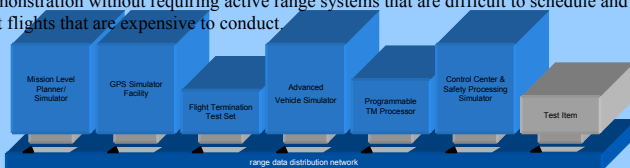
## Mission Planning Lab (MPL)

MPL provides a mathematically correct, visually rich environment that allows realistic simulation, presentation and evaluation of platform selection, flight profiles, and range asset placement. By integrating detailed information on vehicle capabilities, range capabilities, and mission specific objectives, MPL will meet several critical current needs for the Research Range.



## Advanced Range Integrated Simulation Environment (ARISE)

ARISE will be a suite of increasingly integrated simulators, tools, systems, and facilities that provide a new capability for simulating the end-to-end vehicle-range interaction and mission performance to the subsystem level. ARISE will be capable of emulating the full spectrum of systems involved in launch operations, offering a unique national capability that will serve as a test-bed in which new range or vehicle technologies (hardware, software, or processes) can be integrated for validation and demonstration without requiring active range systems that are difficult to schedule and test flights that are expensive to conduct.



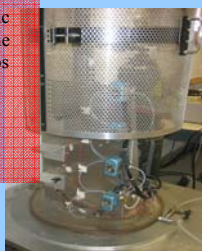
## Wallops Intranet/Internet



The Wallops website (<http://www.wff.nasa.gov>) serves the entire WFF community to educate customers and the public, in general, via the internet. The Wallops Intranet (<http://internal.wff.nasa.gov>) is an internal-only resource for all WFF employees. Web tools and technologies continue to be incorporated into each in an effort to provide quick and efficient information dissemination throughout the WFF workforce. PAO and the Advance Projects Office support these entities.

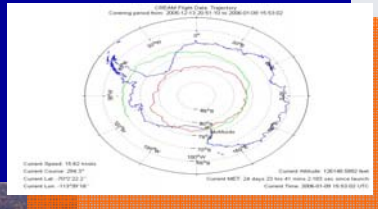
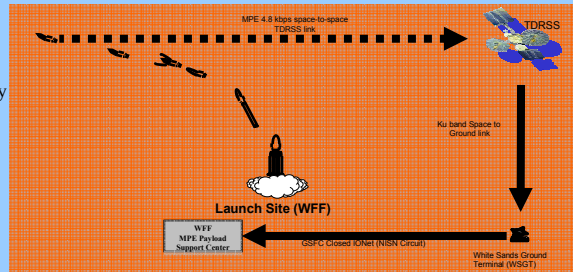
## Ozonesonde Pump Efficiency System (OPES)

This system controls a vacuum chamber to various atmospheric pressure levels and calculate the pumps speed at each altitude. The change in speed is the direct correlation to efficiency of the pumps verses altitudes. The software controls test four pumps at a time then calculates the correction coefficients for each pump. These correction coefficients will increase the accuracy of ozone measurements due to the non-linear characteristics of the pumps.



## Multiple Payload Ejector (MPE) Payload Control Center (MPCC)

The MPE is a small, multiple payload carrier capable of carrying primary, secondary and tertiary payloads to LEO, using a DARPA FALCON launch vehicle. Data from the launch vehicle and the MPE will be transmitted to the MPSC at WFF and archived. Real-time displays will display data as it is received. Payload teams will be notified via Internet of the status of their payload.



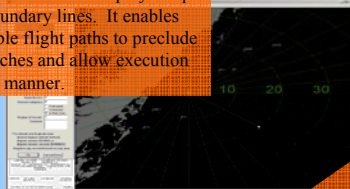
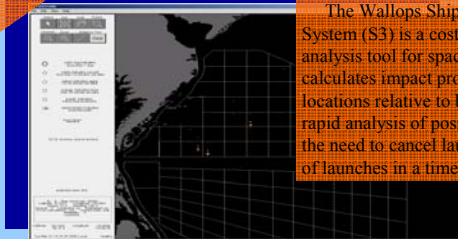
## CREAM II

CREAM II is a balloon support systems development to support a UMD Cosmic Ray Energetics and Mass experiment. CREAM II has successfully completed its scheduled flight on a long duration balloon from Antarctica. Code 589 is responsible for the CREAM II flight software and control center development as well as launch and flight support.

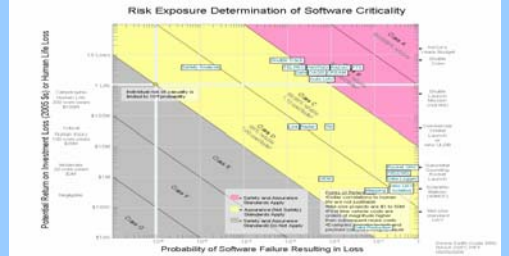


## Ship Surveillance System (S3)

The Wallops Ship Surveillance Software System (S3) is a cost-effective day-of-launch risk analysis tool for spaceport activities. The system calculates impact probabilities and displays ship locations relative to boundary lines. It enables rapid analysis of possible flight paths to preclude the need to cancel launches and allow execution of launches in a timely manner.



## Software Safety

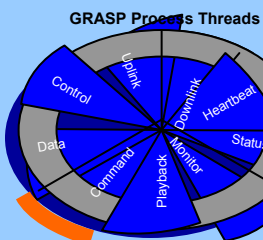


## Remote Payload Control System (RPCS)

The RPCS performs on-pad monitoring of housekeeping functions, payload power switching and control. The current effort endeavors to expand the RPCS system to control and monitor (Capacitive Discharge Ignition) CDI components which arm and initiate second stage ignition and despin systems. Code 589 is providing software safety support for the project.

## Generic Reusable Aerospace Software Platform (GRASP)

GRASP is a modular, generic framework for software applications consisting of code libraries, generic processes, and a process template. GRASP grew out of the ULDB Flight Software effort and has the potential to become the basis for many types of software applications.



- Control Thread (100% generic) - Processes MCP commands
- Heartbeat Thread (100% generic) - Consolidates process heartbeats
- Playback Thread (100% generic) - Plays back recorded process status
- Data Thread - Ingests interprocess data messages
- Status Thread - Acquires external/hardware status
- Command Thread - Processes interprocess commands
- Monitor Thread - Monitors and acts on subsystem data changes
- Uplink Thread - Receives ground commands
- Downlink Thread - Encodes and forwards data to ground

